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SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT 68-W5-0009

JUL 15 10 24 AM '98

10 July 1998
11098-031-001-5151-70
DC No. A-2600

Mr. Charles Schwer
Agency of Natural Resources
Vermont Department of Environmental Conservation
Hazardous Materials Management Division
103 South Main Street
Waterbury, Vermont 05671-0404

Subject: Final Site Inspection Report
Proctor Dump
Pittsford, Vermont
CERCLIS No. VTD982542771
TDD No. 98-05-0107

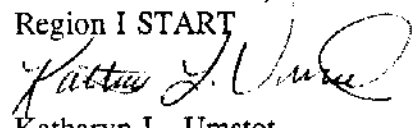
Dear Mr. Schwer:

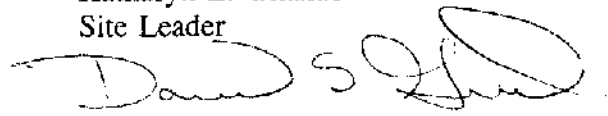
Enclosed are two copies of the Final Site Inspection (SI) Report for the Proctor Dump property in Pittsford, Vermont. The U.S. Environmental Protection Agency Region I (EPA Region I), Office of Site Remediation and Restoration and the Vermont Department of Environmental Conservation (VT DEC) supplied no comments regarding the contents of the Draft SI Report. Comments submitted by the former property owner have been incorporated into this report. Attachments have been omitted from this final deliverable as no comments or changes to the attachments were requested during the review process.

Please contact the undersigned at (781) 229-6430 if you have any questions regarding this report.

Very truly yours,

ROY F. WESTON, INC.
Region I START


Katharyn L. Umstot
Site Leader


David S. Gorden
Work Group Leader

KLU:klu
Enclosures
cc: L. Johnson (EPA Task Monitor)

S:\97020035\PROCTOR FNL

**FINAL SITE INSPECTION REPORT
FOR
PROCTOR DUMP
PITTSFORD, VERMONT**

Prepared for:
U.S. Environmental Protection Agency
Region I
Office of Site Remediation and Restoration
John F. Kennedy Federal Building
Boston, MA 02203-0001

CONTRACT NO. 68-W5-0009

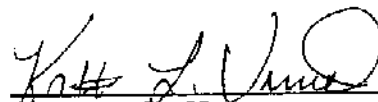
CERCLIS No. VTD982542771
TDD NO. 98-05-0107
PCS NO. 5151
DC NO. A-2557

Submitted by:

Roy F. Weston, Inc. (WESTON®)
Superfund Technical Assessment and Response Team (START)
217 Middlesex Turnpike
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25 June 1998

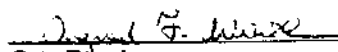
Region I START
Reviewed and Approved:


Katharyn L. Umstot
Site Leader

25 June 1998
Date


David S. Gorden
Work Group Leader

25 June 1998
Date


QA Review

25 June 1998
Date

Work Order No. 11098-031-001-5151-70

DISCLAIMER

This report was prepared solely for the use and benefit of the U.S. Environmental Protection Agency Region I (EPA Region I), Office of Site Remediation and Restoration for the specific purposes set forth in the contract between the EPA Region I and the Roy F. Weston, Inc. (WESTON®), Superfund Technical Assessment and Response Team (START). Professional services performed and reports generated by START have been prepared for EPA Region I purposes as described in the START contract. The information, statements, and conclusions contained in the report were prepared in accordance with the statement of work, and contract terms and conditions. The report may be subject to differing interpretations or misinterpretation by third parties who did not participate in the planning, research or consultation processes. Any use of this document or the information contained herein by persons or entities other than the EPA Region I shall be at the sole risk and liability of said person or entity. START, therefore, expressly disclaims any liability to persons other than the EPA Region I who may use or rely upon this report in any way or for any purpose.

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INTRODUCTION

The Roy F. Weston, Inc. (WESTON®) Superfund Technical Assessment and Response Team (START) was requested by the U.S. Environmental Protection Agency Region I (EPA Region I), Office of Site Remediation and Restoration to perform a Site Inspection (SI) of the Proctor Dump property at John Deere Road in Pittsford, Vermont. Tasks were conducted in accordance with the SI scope of work and technical specifications provided by EPA Region I. A Preliminary Assessment (PA) Report for the Proctor Dump property was prepared by Vermont Agency of Natural Resources (VT ANR) in October 1987. On the basis of the information provided in the PA report, the Proctor Dump SI was initiated.

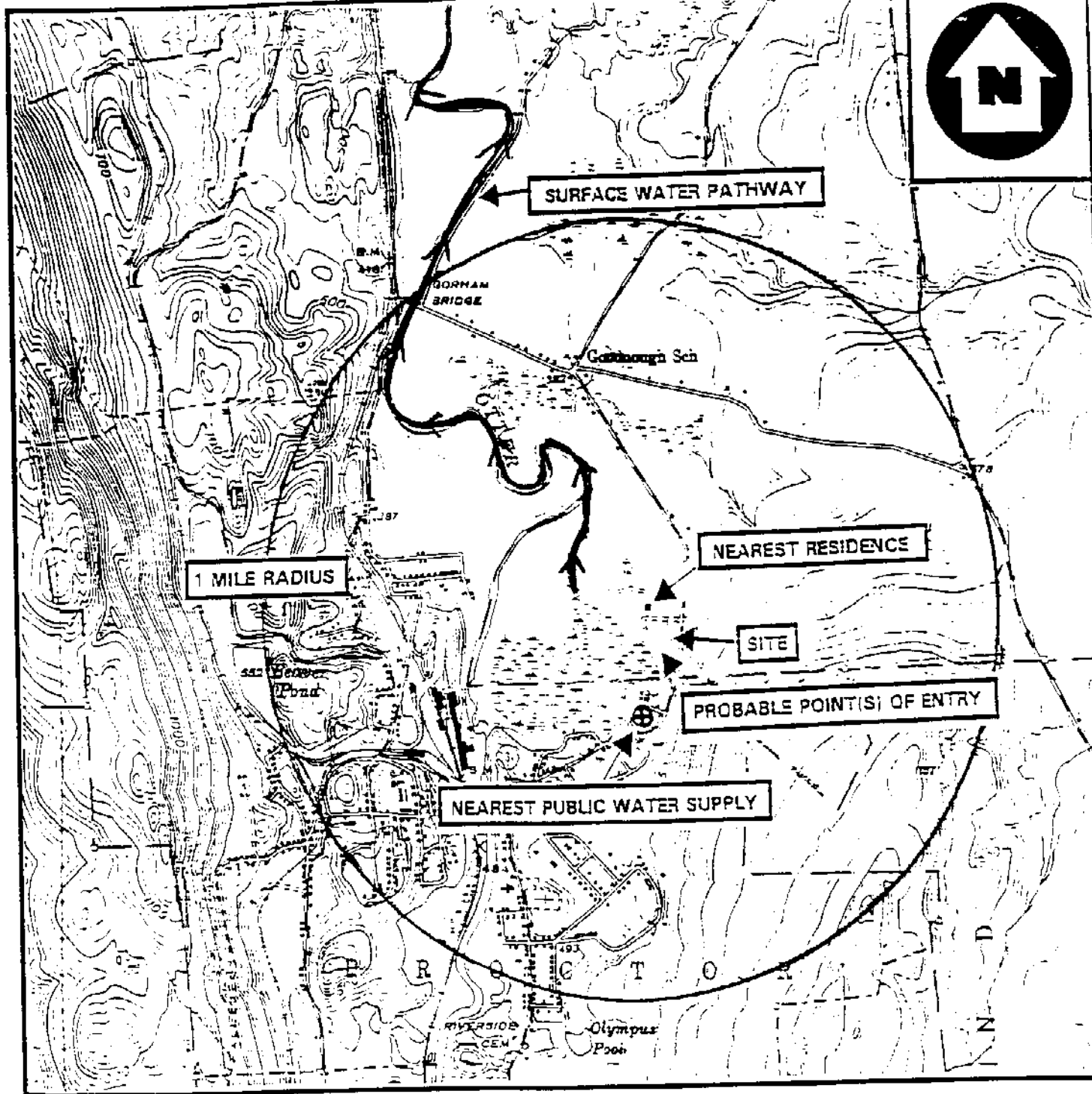
Background information used in the generation of this report was obtained through file searches conducted at the EPA Region I, VT ANR, telephone interviews with town officials, conversations with persons knowledgeable of the Proctor Dump property and conversations with other Federal, State, and local agencies.

This package follows the guidelines developed under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, commonly referred to as Superfund. However, these documents do not necessarily fulfill the requirements of other EPA Region I regulations such as those under the Resource Conservation and Recovery Act (RCRA) or other Federal, State, or local regulations. SIs are intended to provide a preliminary screening of sites to facilitate EPA Region I's assignment of site priorities. They are limited efforts and are not intended to supersede more detailed investigations.

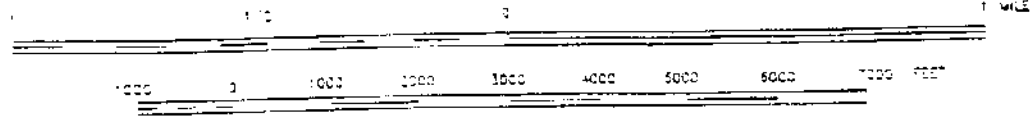
SITE DESCRIPTION

Proctor Dump (the dump) is a former municipal dump located on John Deere Road in the Town of Pittsford, Rutland County, Vermont (Figure 1) at 43° 40' 5.0" N and 73° 01' 26.6" W [1]. The dump is located on two lots identified on Pittsford Tax Assessor's Map No. 11 (Figure 2). The northern portion of the dump is located on the southern portion of Lot No. VT3-96, owned by Mr. William Taranovich Sr. [2]. Until 30 May 1997, the southern portion of the dump was designated as the northern portion of Lot No. VT3-98 (then owned by Omya, Inc.). On 30 May 1997, Omya, Inc. deeded the Proctor Dump portion of Lot No. VT3-98 to the Town of Proctor. To date, the Pittsford Tax Assessor's office has not assigned a new lot number to the Proctor Dump portion of Lot No. VT3-98 [45].

The Proctor Dump was leased to the Town of Proctor from approximately the 1930s to 1997. Vermont Marble Company, the original owner of Lot No. VT3-98, conveyed the property to Omya, Inc. in the late 1970s [3, p. 3]. Lot No. VT3-96 has been in the Taranovich family since the early 1900s and was used as farm land prior to the current retail building [45]. The Proctor Dump operated as a municipal solid waste dump from approximately the 1930s to the early 1980s. Proctor Dump is currently closed. There is no record regarding property use prior to the 1930s [3, p. 3].



BASE MAP IS A PORTION OF THE FOLLOWING 7.5' X 7.5' U.S.G.S. QUADRANGLE:
PROCTOR, VERMONT



QUADRANGLE LOCATION

LOCATION MAP

PROCTOR DUMP
JOHN DEERE ROAD
BUTTSFORD, VERMONT

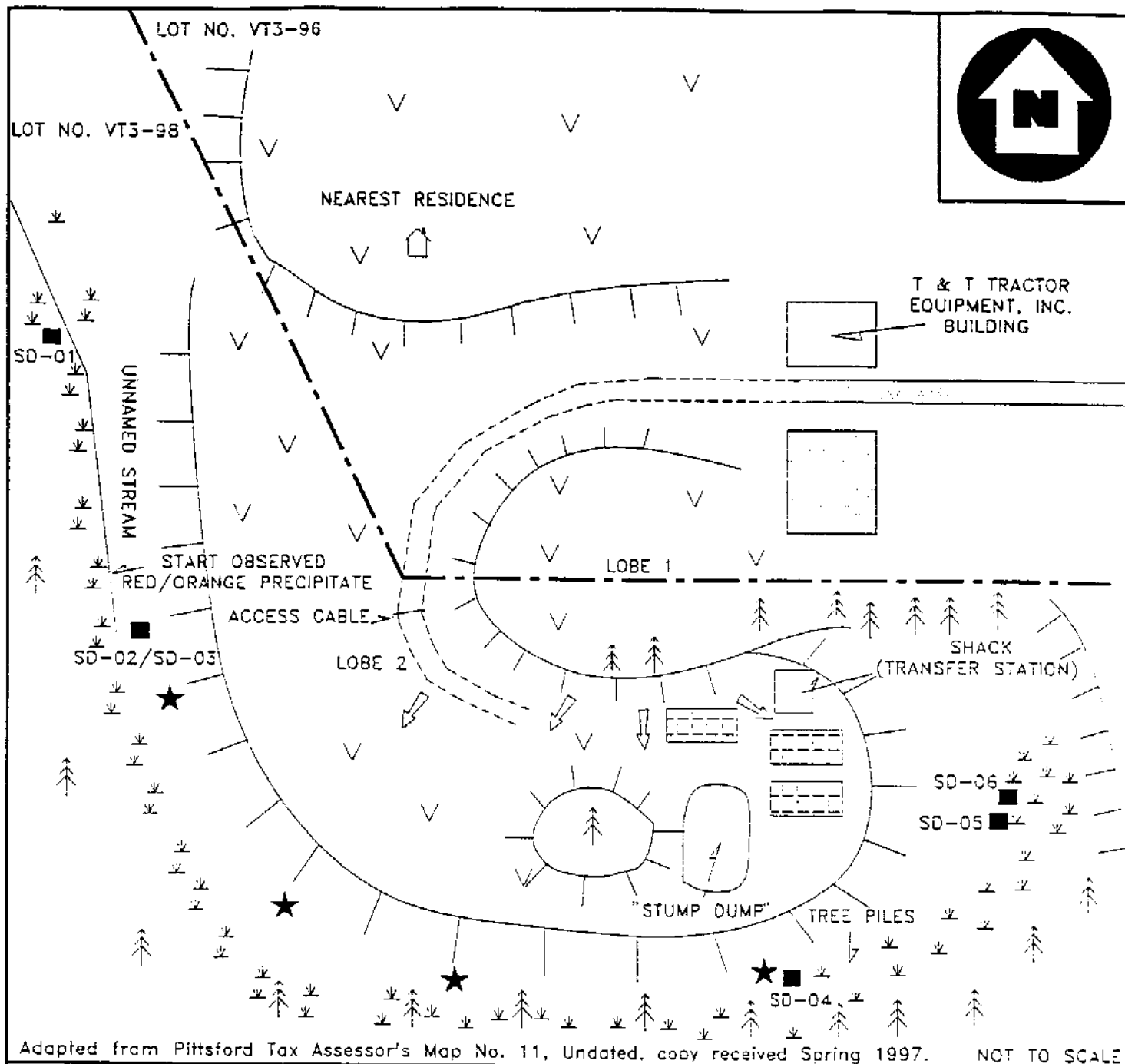


REGION SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

100 # 97-02-0035	DRAWN BY K. UMSTOT	DATE 5/5/97
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FIGURE 1



LEGEND

	OVERLAND FLOW DIRECTION		DIRT ROAD		PROPERTY LINE
	ASPHALT PAVING		PROBABLE POINT OF ENTRY		GRASS
	WETLANDS		SLOPE (TICKS DOWNHILL)		STREAM
	TREE		START SEDIMENT SAMPLE LOCATION		TRAILER
					HOUSE

SITE SKETCH

PROCTOR DUMP
JOHN DEERE ROAD
PITTSFORD, VERMONT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD # 97-02-0035 DRAWN BY: K. UMSTOT DATE: 2/5/98

FILE NAME:
S: 97020035 FIG2.DWG

FIGURE 2

On 13 May 1997, START personnel conducted an on-site reconnaissance at Proctor Dump. Periodic ambient air monitoring utilizing a photoionization detector (PID) was conducted during the on-site reconnaissance. No readings above background were observed [3, p. 3]. START personnel observed that the upper lobe (Lobe No. 1) was covered with maintained grass and a few trees on the southern slope. The eastern and northern sides of Lobe No. 1 open to a paved parking area and are at a constant elevation. The southern and western sides of Lobe No. 1 gently slope to Lobe No. 2, which was also observed to be covered with maintained grass. A dirt access road that partially circled the base of Lobe No. 1 on the northern, western, and southern borders was observed on Lobe No. 2. START personnel observed that there was a locking cable across the access road; however, the property was accessible to pedestrian and vehicular traffic from all other directions. Wetlands were observed at the toe of Lobe No. 2 on the eastern, southern, and western borders. An unnamed stream was located on the northwestern border of the dump. No leachate outbreaks were observed at the toe of the two lobes of the dump; however, a red-orange precipitate was observed in the unnamed stream [3, p. 7-8]. START personnel observed a pile of burned trees and brush (stump dump), as well as piles of cut trees and brush disposed of into the wetland, on the southeastern edge of Lobe No. 2 [3, p. 4]. Surface water runoff from the Proctor Dump was observed to drain to the wetland, which is the probable point of entry (PPE) to the surface water pathway [3].

OPERATIONAL AND REGULATORY HISTORY AND WASTE CHARACTERISTICS

The Proctor Dump accepted municipal solid waste from Proctor from approximately the 1930s to 1981. Pittsford also disposed of municipal solid waste in the dump from approximately 1965 to 1971 [3, p. 2]. Prior to the 1970s, the municipal solid waste was burned in an on-site burning dump [3, p. 4]. In 1967, this original burning dump area was closed and capped with silty sands. The burning dump (Lobe No. 1) is approximately 67,000 square feet (ft²) [4]. In 1967, Proctor established a second lobe of the dump, 20 to 30 feet (ft) downslope of the first lobe, and began operating under the guidance of the VT ANR, which included the following procedures: compaction and capping of wastes. Lobe No. 1 is approximately 148,000 ft² [4]. The PA conducted by VT ANR in 1987 indicated that the Proctor Dump operated until 1981. However, during the on-site reconnaissance, START personnel were informed by town officials that Proctor Dump accepted municipal solid waste until 1984 [3, p. 2]. Town officials reported to START that both lobes of the dump were covered with clean fill material [3, p. 4]. Currently, the second lobe of the closed dump is operated as a transfer station and stump and brush burning area by Proctor for its residents [3; 5, p. 1].

Proctor Dump is mapped within the aquifer protection area (APA) for the Proctor Water Department public water supply well [3, p. 3]. Due to the location of the APA, and complaints regarding municipal solid waste floating in the adjacent wetland, Proctor Dump did not receive state approval to operate as a dump. The PA conducted in 1987 by VT ANR documented that from 1969 until its alleged closure in 1981, the dump operated under an Assurance of Discontinuance from VT ANR [5, p. 1]. No further information regarding the Assurance of Discontinuance was available [3; 5, p. 1].

Municipal solid waste is the only type of waste documented to have been disposed of at Proctor Dump. There is no record of hazardous waste disposed of on the property; however, the PA reports that Callahan AMS, Inc., a can manufacturing division of Vermont Marble Company,

may have disposed of metal shavings and solvent-containing debris into Proctor Dump during the 1940s [5, p. 1]. According to Omya, Inc., the Callahan can manufacturing division was not established until 1955 (under the name Callahan Cans) [45]. The Vermont Marble Company, the main industry in both Pittsford and Proctor, was purchased by Omya, Inc. in the late 1970s [3, p. 3].

Table 1 presents identified structures or areas on the Proctor Dump property that are documented or potential sources of contamination, the containment factors associated with each source, and the relative location of each source.

Table 1
Source Evaluation for Proctor Dump

Source Area	Containment Factors	Spatial Location
Landfill	Fill material cover	On top of Lobe Nos. 1 and 2

[3]

Table 2 summarizes the types of potentially hazardous substances which have been disposed, used, or stored on the Proctor Dump property.

Table 2
Potentially Hazardous Substances Associated with Proctor Dump

Substance	Quantity or Volume/Area	Years of Use/Storage	Years of Disposal	Source Area
Municipal Solid Waste	Unknown	1930s to 1981	1930s to 1981	Landfill

[3]

There are two Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) and four RCRA properties located in Pittsford [41; 42].

WASTE/SOURCE SAMPLING

On 26 June 1997, START attempted to collect source samples from Lobe Nos. 1 and 2 of Proctor Dump, but was not able to extend the auger beyond the layer of fill. To date, no known source samples have been collected from the Proctor Dump property. START did not observe any changes in site conditions since the on-site reconnaissance [3].

GROUNDWATER PATHWAY

The Proctor Dump is located in the Otter Creek River Valley. Boring logs recorded for private groundwater supply wells located south of the property indicate that bedrock is overlain by approximately 100 feet of clay and a thin veneer of recent alluvium [5, p. 2]. The Proctor municipal water supply well, approximately 1,000 ft south of Proctor Dump, is advanced in 135 ft of sand and gravel, which has a brown clay layer located from 30 to 52 ft beneath the ground surface [5, p. 2]. Bedrock in the area is primarily composed of limestones, dolomites, and marbles, and is usually found at a depth of 200 to 375 ft. No bedrock formation mapped within 4-radial miles of the property exhibits karst characteristics.

Due to the proximity of the unnamed stream wetland (wetlands located upstream of the unnamed stream), located along the southern toe of the dump, the groundwater table is assumed to be shallow. Lobe No. 1 is located at approximately 400 ft above mean sea level. Lobe No. 2 is located from approximately 370 to 380 ft above mean sea level [5, p. 2]. The mean annual precipitation in the vicinity of Pittsford, as measured in Chittenden, Vermont, is 42.07 inches [36, p. 4]. Groundwater flow direction is unknown, but based on the Proctor, Vermont topographic quadrangle, is presumed by START to flow north [1]. The location of the closest private well is not known [5].

Towns located within 4-radial miles of the Proctor Dump property include Chittenden, Pittsford, Proctor, Rutland, and West Rutland [1; 20; 24-26].

The population of Pittsford is served by two public water supplies. The Pittsford Water Department supplies water to an estimated 450 people residing in the village of Pittsford from six springs located more than 4-radial miles from the property [5, p. 4; 14]. The Florence Water System (FWS), also owned and operated by Pittsford, serves an estimated 150 people with one gravel-packed supply well. The FWS supply well is located approximately 3.3 miles northwest of the property [14]. Corn Hill Estates maintains a community drinking water supply well approximately 2.2 miles northeast of the property. This bedrock well serves an estimated 75 people [5, p. 4].

The Town of Chittenden has no public water supply wells. There are approximately 550 private groundwater supply wells serving the residents of the town. The locations of the private wells are not documented [15].

The Town of Proctor is served by a surface water intake on Kiln Brook in Chittenden, located more than 4-radial miles from the property, and not within 15-downstream miles of the property. A public drinking water supply well, used only as a backup water supply source for Proctor, is located approximately 1,000 ft south, and presumably upgradient, of Proctor Dump. The well is annually tested for, among other water quality criteria, VOCs, SVOCs, PCBs, and metals. The most recent test results, dated March 1997, indicated that no contaminants were detected in the well [16; 40]. Proctor Dump is located within the APA for this well. The well has the capacity to serve the entire population of Proctor (an estimated 1,979 people) but was last used in 1994 [16; 17]. According to the Proctor Water Department, there are no private water supply wells that provide drinking water to residents of Proctor [16].

Public water for the Town of Rutland is supplied by a combination of a surface water intake at the Rutland City Reservoir and 10 Rutland Fire Districts (public groundwater wells) [18; 19]. The Rutland City Reservoir is not located on the 15-mile downstream surface water pathway for Proctor Dump [20]. The fire districts each supply between 50 and 500 residents with water from groundwater supply wells and are located greater than 4-radial miles from Proctor Dump [21]. The remainder of the population is supplied by private drinking water supply wells.

The Town of West Rutland is supplied by two gravel-packed wells located on Fairview Road, more than 4-radial miles from the Proctor Dump. There are 700 households served by the public water supply wells. The rest of the population (an estimated 2,500 people) is supplied by private groundwater supply wells [22]. Table 3 summarizes the public groundwater supply sources located within 4-radial miles of Proctor Dump.

Table 3

Public Groundwater Supply Sources Within 4-Radial Miles of Proctor Dump

Distance/ Direction from Site	Source Name	Location of Source ^a	Estimated Population Served	Source Type ^b
1,000 feet S	Proctor Municipal Well	Proctor	0	Overburden
2.2 miles NE	Corn Hill Estates Well	Pittsford	75	Bedrock
3.3 miles NW	Florence Water System Supply Well	Pittsford	150	Overburden

^a Indicates Town in which well is located.

^b Overburden, Bedrock, or Unknown.

[5: 14; 16]

Private groundwater supplies within 4-radial miles of the property were estimated using equal distribution calculations of U.S. Census CENTRACTS data identifying population, households, and private water wells for "Block Groups" which lie within or partially within individual radial distance rings from Proctor Dump [23]. The location of the nearest private well was not available from file information or identified during START site visits. Table 4 summarizes the estimated drinking water populations served by groundwater sources within 4-radial miles of Proctor Dump.

Table 4**Estimated Drinking Water Populations Served by Groundwater Sources
Within 4-Radial Miles of Proctor Dump**

Radial Distance from Proctor Dump (miles)	Estimated Population Served by Private Wells	Estimated Population Served by Public Wells	Total Estimated Population Served by Groundwater Sources Within the Ring
≥ 0.00 to 0.25	6	0	6
> 0.25 to 0.50	15	0	15
> 0.50 to 1.00	59	0	59
> 1.00 to 2.00	269	0	269
> 2.00 to 3.00	613	75	688
> 3.00 to 4.00	811	150	961
TOTAL	1,773	225	1,998

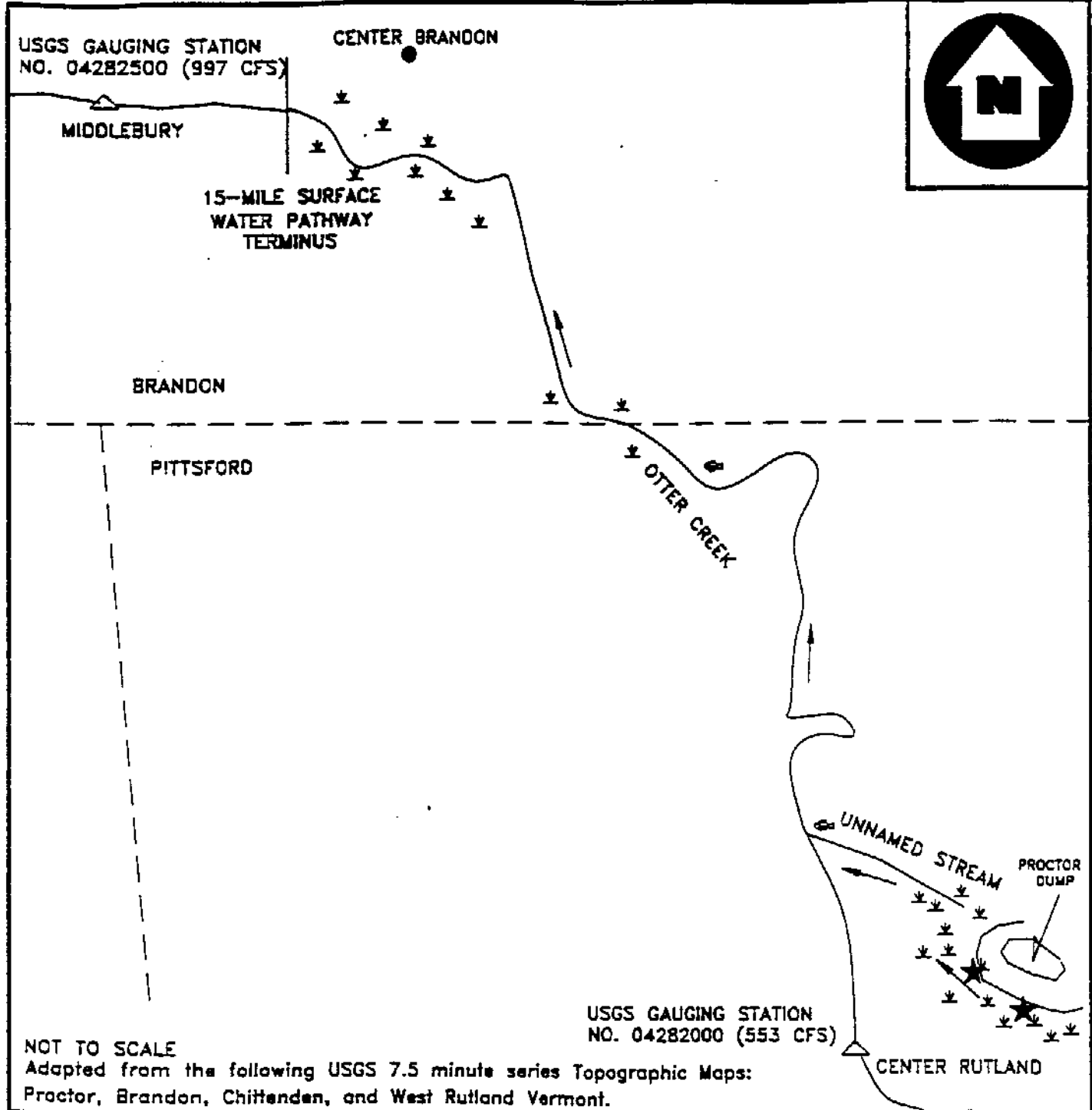
[23]

START did not perform groundwater sampling as part of the Proctor Dump property SI and there has been no previous groundwater sampling conducted on the Proctor Dump property. Since no groundwater sampling has been conducted at the Proctor Dump property, there has been no record of a release of hazardous substances to the groundwater beneath the Proctor Dump property. There is an emergency public water supply well located in Proctor, approximately 1,000 ft south of the Proctor Dump property; however, no contamination has been documented to have occurred in the emergency public water supply well and no population currently relies on the well [16].

SURFACE WATER PATHWAY

Surface water runoff from Proctor Dump drains to the unnamed stream wetland, located to the south, east, and west of Proctor Dump, which is the PPE to the surface water pathway. In the wetland, runoff flows approximately 0.1 miles (through the wetland) into the unnamed stream. The unnamed stream flows approximately 0.1 miles to Otter Creek. The surface water pathway continues for approximately 14.8 miles along Otter Creek to the terminus of the 15-mile downstream surface water pathway on Otter Creek in Brandon, Vermont, approximately 1 mile west of the center of Brandon (Figure 3) [1; 20; 24-26]. The southern portion of the dump is located within the 100-year flood limits of Otter Creek [2].

START personnel estimated the flow rate for each segment of the 15-mile downstream surface water pathway by measuring the area of the drainage basin (in square miles) for each segment and multiplying the area by the U.S. Geological Survey (USGS) conversion factor of 1.8 cubic ft per second (cfs) per square mile.



LEGEND

- | | | | |
|-----|-------------------------|-----|--------------------------------|
| ★ | PROBABLE POINT OF ENTRY | 🐟 | FISHERY |
| ⊕ | WETLAND | → | STREAM OR RIVER FLOW DIRECTION |
| --- | TOWN BOUNDARY | CFS | CUBIC FEET PER SECOND |

SURFACE WATER PATHWAY SKETCH

PROCTOR DUMP
JOHN DEERE ROAD
PITTSFORD, VERMONT



REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TOD #
97-02-0038

DRAWN BY:
K. UMSTOT

DATE
5/5/97

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FIGURE 3

The mean annual flow rate of the unnamed stream is estimated to be 1.2 cfs; therefore, the flow rate of the water in the wetlands located upstream of the unnamed stream is presumed to be less than 1.2 cfs [27].

USGS has maintained a gaging station (04282000) at Otter Creek in Center Rutland since 1928. The mean annual surface water flow rate in Otter Creek at Center Rutland, observed from 1928 to 1994, upstream from the PPE, is approximately 553 cfs. USGS additionally maintains a gaging station (04282500) downstream of the 15-mile downstream surface water pathway terminus, in Middlebury, Vermont. The reported surface water flow rate at Middlebury, Vermont is approximately 997 cfs [28]. Table 5 summarizes surface water bodies, flow characteristics, and wetlands frontage along the 15-mile downstream surface water pathway from Proctor Dump [1; 20; 24-26; 28-34; 37].

Table 5

Surface Water Bodies Along the 15-Mile Downstream Pathway from Proctor Dump

Surface Water Body	Descriptor ^a	Length of Reach (miles)	Flow Characteristics (cfs) ^b	Length of Wetlands (miles)
Unnamed Stream Wetland	Minimal stream	0.1	< 1.2	0.4
Unnamed Stream	Minimal stream	0.1	1.2	0.3
Otter Creek	Moderate to large stream	14.8	> 553 and < 997	12.8

- ^a Minimal stream < 10 cfs. Small to moderate stream 10-100 cfs. Moderate to large stream > 100-1,000 cfs. Large stream to river > 1,000-10,000 cfs. Large river > 10,000-100,000 cfs. Very large river > 100,000 cfs. Coastal tidal waters (flow not applicable). Shallow ocean zone or Great Lake (flow not applicable). Moderate depth ocean zone or Great Lake (flow not applicable). Deep ocean zone or Great Lake (flow not applicable). Three-mile mixing zone in quiet flowing river 10 cfs or greater.
- ^b Cubic feet per second.

[1; 20; 24-26; 28-34; 37]

There are no surface water drinking water intakes located along the 15-mile downstream surface water pathway from Proctor Dump [14; 35; 38]. During the on-site reconnaissance, START observed open water segments of the unnamed stream that indicate that the stream may be the habitat for small fish and other aquatic species. For the purposes of this evaluation, START considers the unnamed stream to be a fishery; however, no documentation regarding the status of the unnamed stream was available at the time of this SI [3]. Based on field observations, which included deep, open water river segments, START presumes that Otter Creek is a fishery.

No sensitive environments were reported by VT ANR to exist along the 15-mile downstream surface water pathway from Proctor Dump [29-34; 37]. Table 6 summarizes sensitive environments located along the 15-mile downstream surface water pathway from Proctor Dump.

Table 6

Sensitive Environments Along the 15-Mile Downstream Pathway from Proctor Dump

Sensitive Environment Name	Sensitive Environment Type	Surface Water Body	Downstream Distance from PPE (miles)	Flow Rate at Environment (cfs) ^a
Wetlands	0.4 miles wetlands	Unnamed Stream Wetlands	0	< 1.2
Clean Water Act	Clean Water Act	Unnamed Stream	0.1	1.2
Wetlands	0.3 miles wetlands	Unnamed Stream	0.1	1.2
Wetlands	12.8 miles wetlands	Otter Creek	0.2	> 553 and < 997

^a Cubic feet per second

PPE = Probable Point of Entry

[29-34; 37]

On 26 June 1997, START personnel collected six sediment samples (SD-01 through SD-06) from the unnamed stream and unnamed stream wetlands located along the western, southern, and eastern borders of Proctor Dump. The sediment samples were analyzed for VOCs, SVOCs, pesticides/PCBs, metals, and cyanide. Table 7 provides a summary of the samples collected.

Table 7

Sample Summary: Proctor Dump
Sediment Samples Collected by START on 26 June 1997

Sample Location No.	Traffic Report No.	Time (hrs)	Remarks	Sample Source
MATRIX: Sediment				
SD-01	AMX69 MAKK93	1300	Grab	Grab sediment sample collected from unnamed stream on west border of the dump. The sediment was clayey silt with a dark brown to black color, and with 2 to 3 inches of organic matter on the surface.
SD-02	AMX70 MAKK94	1300	Grab	Grab sediment sample collected from a downstream PPE to the wetland, located on the west border of the dump. The sediment was comprised of dark brown to gray silty clay.
SD-03	AMX71 MAKK95	1300	Grab	Duplicate of SD-02 collected for quality control. The sediment had similar composition as SD-02.
SD-04	AMX72 MAKK96	1405	Grab	Grab sediment sample collected from an upstream PPE. The sediment was comprised of a silty solid on the surface, with black muck beneath.
SD-05	AMX73 MAKK97	1400	Grab	Grab sediment sample collected upstream of the property to serve as a reference sample. The sediment was comprised of silty-clay, and a fine to medium grained sand mixed with small amounts of organic matter.
SD-06	MAKK98	1410	Grab	Grab sediment sample collected in the vicinity of SD-05 to serve as a second reference sample for metals analysis only. The sediment had similar composition as SD-05.

PPE = Probable Point of Entry

[3, pp. 12-14]

Sample SD-01 was collected from the unnamed stream, approximately 300 ft downstream of the western toe of the dump. The sediment was clayey silt, dark-brown to black in color, with 2 to 3 inches of organic matter on the surface. Samples SD-02 and SD-03 were collected from wetlands at the western toe of the dump. The sediment was comprised of dark-brown to gray silty clay. Sample SD-04 was collected from wetlands at the southeast toe of the dump. The sediment was comprised of a silty soil on the surface, with black muck beneath. Samples SD-05 and SD-06 were collected from approximately 450 ft upstream of the eastern toe of the dump. The sediment was comprised of silty clay, and a fine-to-medium grained sand mixed with small amounts of organic matter [3].

Table 8 is a summary of organic compounds and inorganic elements detected through Contract Laboratory Program (CLP) analyses of START sediment samples. For each sample location, a compound or element is listed below if it is detected at three times or greater than the reference sample concentrations SD-05. For metals results, the highest concentration from either SD-05 or SD-06 is used as the reference concentration. However, if the compound or element is not detected in the reference sample, the reference sample quantitation limit (SQL) (for organic analyses) or sample detection limit (SDL) (for inorganic analyses) is used as the reference value. These compounds or elements are listed if they occurred at a value equal to or greater than the reference sample's SQL or SDL and are designated by their approximate relative concentration above these values.

Complete analytical results of START sediment samples including quantitation and detection limits are presented in Attachment A. Sample results quantified with a "J" on analytical tables are considered approximate because of limitations identified during CLP data validation. In addition, organic sample results reported at concentrations below quantitation limits and confirmed by mass spectrometry are also qualified by a "J" and considered approximate. Pentachlorophenol was rejected in sample SD-03 because matrix spike recoveries were less than 10%. Pesticide/PCB results were rejected for sample SD-01, and results for dieldrin were rejected for samples SD-01, SD-02, and SD-03 due to non-compliant compound identification criteria. Cyanide results were rejected in SD-01 through SD-05 due to poor matrix spike recovery [43; 44].

Table 8
Summary of Analytical Results
Sediment Sample Analysis for Proctor Dump
Collected by START on 26 June 1998

Sample Location	Compound/ Element	Sample Concentration	Reference Concentration	Comments
SD-01 (AMX69) (MAKK93)	VOCs			
	Acetone	68 ppb	14 UJ ppb	4.86 × SQL
	2-Butanone	22 J ppb	14 U ppb	1.57 × SQL
	Chlorobenzene	19 ppb	14 U ppb	1.36 × SQL
	Methylene Chloride	36 ppb	2 J ppb	18 × Ref
	SVOCs			
	Benzo(a)anthracene	160 J ppb	49 J ppb	3.27 × Ref
	Benzo(b)fluoranthene	230 J ppb	62 J ppb	3.71 × Ref
	Bis(2-ethylhexyl)phthalate	1,500 ppb	70 J ppb	21.43 × Ref
	Fluoranthene	320 J ppb	85 J ppb	3.76 × Ref
	Pyrene	340 J ppb	70 J ppb	4.86 × Ref

Table 8

Summary of Analytical Results
Sediment Sample Analysis for Proctor Dump
Collected by START on 26 June 1998 (Continued)

Sample Location	Compound/ Element	Sample Concentration		Reference Concentration		Comments
SD-01 (AMX69) (MAKK93) (cont)	INORGANICS					
	Aluminum	13,500	ppm	2,640	ppm	5.11 × Ref
	Barium	102	ppm	16.5	ppm	6.18 × Ref
	Beryllium	0.35	ppm	0.05	U ppm	7.0 × SDL
	Lead	24.2	ppm	7.4	ppm	3.27 × Ref
	Vanadium	20.1	ppm	5.2	ppm	3.87 × Ref
SD-02 (AMX70) (MAKK94)	SVOCs					
	Acenaphthylene	570	J ppb	460	U ppb	1.24 × SQL
	Anthracene	1,400	J ppb	460	U ppb	3.04 × SQL
	Benzo(a)anthracene	8,100	ppb	49	J ppb	165.31 × Ref
	Benzo(b)fluoranthene	13,000	ppb	62	J ppb	209.68 × Ref
	Benzo(k)fluoranthene	4,400	ppb	460	U ppb	9.57 × SQL
	Benzo(g,h,i)perylene	2,400	ppb	460	U ppb	5.22 × SQL
	Benzo(a)pyrene	8,000	ppb	460	U ppb	17.39 × SQL
	Chrysene	7,600	ppb	460	U ppb	16.52 × SQL
	Fluoranthene	12,000	ppb	85	J ppb	141.18 × Ref
	Fluorene	690	J ppb	460	U ppb	1.5 × SQL
	Indeno(1,2,3-cd)pyrene	2,600	ppb	460	U ppb	5.65 × SQL
	Phenanthrene	4,200	ppb	460	U ppb	9.13 × SQL
	Pyrene	9,000	J ppb	70	J ppb	128.57 × Ref
	PESTICIDES/PCBs					
	4,4'-DDT	8.6	J ppb	4.6	U ppb	1.87 × SQL
	Endosulfan II	6.0	J ppb	4.6	U ppb	1.3 × SQL

Table 8

Summary of Analytical Results
Sediment Sample Analysis for Proctor Dump
Collected by START on 26 June 1998 (Continued)

Sample Location	Compound/ Element	Sample Concentration		Reference Concentration		Comments
SD-02 (AMX70) (MAKK94) (cont)	INORGANICS					
	Barium	49.5	ppm	16.5	ppm	3.0 × Ref
	Lead	22.9	ppm	7.4	ppm	3.09 × Ref
	Sodium	105	J ppm	79.4	U ppm	1.32 × SDL
SD-03 (AMX71) (MAKK95)	VOCs					
	Methylene Chloride	48	J ppb	2	J ppb	24.0 × Ref
	SVOCs					
	Acenaphthylene	460	J ppb	460	U ppb	1 × SQL
	Anthracene	1,500	J ppb	460	U ppb	3.26 × SQL
	Benzo(a)anthracene	7,200	ppb	49	J ppb	146.94 × Ref
	Benzo(b)fluoranthene	10,000	ppb	62	J ppb	161.29 × Ref
	Benzo(k)fluoranthene	4,400	ppb	460	U ppb	9.57 × SQL
	Benzo(g,h,i)perylene	2,400	ppb	460	U ppb	5.22 × SQL
	Benzo(a)pyrene	7,500	ppb	460	U ppb	16.3 × SQL
	Bis(2-ethylhexyl)phthalate	260	J ppb	70	J ppb	3.7 × Ref
	Chrysene	6,600	ppb	460	U ppb	14.35 × SQL
	Fluoranthene	11,000	ppb	85	J ppb	129.41 × Ref
	Fluorene	730	J ppb	460	U ppb	1.59 × SQL
	Indeno(1,2,3-cd)pyrene	2,600	ppb	460	U ppb	5.65 × SQL
	Phenanthrene	4,300	ppb	460	U ppb	9.35 × SQL
	Pyrene	8,400	J ppb	70	J ppb	120.0 × Ref
SD-03 (AMX71) (MAKK95)	PESTICIDES/PCBs					
	4,4'-DDT	8.1	J ppb	4.6	U ppb	1.76 × SQL
	Endosulfan II	5.0	J ppb	4.6	U ppb	1.09 × SQL

Table 8

Summary of Analytical Results
Sediment Sample Analysis for Proctor Dump
Collected by START on 26 June 1998 (Concluded)

Sample Location	Compound/ Element	Sample Concentration	Reference Concentration	Comments
SD-03 (AMX71) (MAKK95) (cont)	INORGANICS			
	Barium	55.3 ppm	16.5 ppm	3.35 × Ref
	Lead	25.1 ppm	7.4 ppm	3.39 × Ref
	Sodium	117 J ppm	79.4 U ppm	1.47 × SDL
SD-04 (AMK72) (MAKK96)	INORGANICS			
	Beryllium	0.07 J ppm	0.05 U ppm	1.4 × SDL
	Sodium	95.2 J ppm	79.4 U ppm	1.2 × SDL

Ref = Reference value.

J = Quantitation is approximate due to limitations identified during the quality control review.

U = Indicates the sample was analyzed but not detected and reports the detection value.

UJ = The reported quantitation limits are qualified estimated.

ppb = Parts per billion.

ppm = Parts per million.

PCBs = Polychlorinated biphenyls.

VOCs = Volatile organic compounds.

SVOCs = Semivolatile organic compounds.

SQL = Sample Quantitation Limit.

SDL = Sample Detection Limit.

[43; 44]

SD-01 contained the following VOCs: acetone, 2-butanone, chlorobenzene, and methylene chloride at concentrations ranging from 19 ppb to 68 ppb. The SVOCs benzo(a)anthracene, benzo(b)fluoranthene, bis(2-ethylhexyl)phthalate, fluoranthene, and pyrene were detected in SD-01 at concentrations ranging from 160 J ppb to 1,500 ppb. The metals aluminum, barium, beryllium, lead, and vanadium were detected in SD-01 at concentrations ranging from 0.35 ppm to 13,500 ppm.

SD-02 contained the SVOCs acenaphthylene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, chrysene, fluorene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene at concentrations ranging from 570 J ppb to 13,000 ppb. The pesticides endosulfan II and 4,4'-DDT were detected in SD-02 at concentrations of 6.0 J ppb and 8.6 J ppb, respectively. Barium, lead, and sodium were detected in SD-02 at concentrations of 49.5 ppm, 22.9 ppm, and 105 J ppm, respectively.

Methylene chloride was detected in SD-03 (collected as a duplicate of SD-02) at a concentration of 48 J ppb. Acenaphthylene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, bis(2-ethylhexyl)phthalate, chrysene, fluorene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene were detected in SD-03 at concentrations ranging from 260 J ppb to 11,000 ppb. Endosulfan II and 4,4'-DDT were detected in SD-03 at concentrations of 5.0 J ppb and 8.1 J ppb, respectively. Barium, lead, and sodium were detected in SD-03 at concentrations of 55.3 ppm, 25.1 ppm, and 117 J ppm, respectively. SD-04 contained beryllium (0.07 J ppm) and sodium (95.2 J ppm) [43; 44].

Since the characteristics of the waste disposed of in Proctor Dump are unknown, and no other sources have been identified directly upstream of the Proctor Dump, based on sample locations it is likely that the VOCs, SVOCs, pesticides, and metals that have been detected in the unnamed stream sediments are attributable to Proctor Dump.

START performed surface water pathway sampling as part of the Proctor Dump SI. No other surface water pathway sampling is known to have been conducted for the Proctor Dump property. Based on the START analytical results, a release of hazardous substances to the nearby unnamed stream has been noted from on-site sources. As a results of the release, a Clean Water Act-protected water body, wetlands, and a fishery have been impacted. No other sensitive environments are known or suspected to have been impacted.

SOIL EXPOSURE PATHWAY

There are two part-time and no full-time employees on the Proctor Dump property. The nearest residence is located approximately 110 ft north of the property [3, p. 6]. There are no known day-care facilities located within 200 ft of an area of observed contamination on Proctor Dump. There are no known terrestrial sensitive environments on the Proctor Dump property [34]. The estimated population located within 1-radial mile from Proctor Dump is 630 people [23].

Municipal solid waste is the only type of waste documented to be disposed of at the Proctor Dump. There is no record of industrial hazardous waste disposed of on the property [3, p. 2].

On 26 June 1997, START personnel attempted to collect source samples from Lobe Nos. 1 and 2 of the dump, but were unable to obtain a sample from beneath the layer of fill. To date, no known surficial soil samples have been collected from the Proctor Dump property. Based on the available data no release of hazardous substances to surficial soils from on-site sources has been documented. Furthermore, based on the site observations and conditions, distance to nearest residence (approximately 110 ft), and lack of public use of the property, no impacts to nearby or residential populations are known or suspected.

AIR PATHWAY

There are two part-time and no full-time employees on the Proctor Dump property. The nearest residence is located approximately 110 ft north of the property [3, p. 6]. The population located within 4-radial miles from Proctor Dump is 8,316 [23]. There are no known day-care facilities located within 200 ft of an area of observed contamination on Proctor Dump. Approximately

1,811 acres of wetlands are located within 4-radial miles of Proctor Dump. The nearest wetland is located adjacent to the southeastern, southern, and southwestern toes of Proctor Dump [3]. Table 9 summarizes the estimated population within each target distance ring within 4-radial miles of Proctor Dump.

Table 9

Estimated Population Within 4-Radial Miles of Proctor Dump

Radial Distance from Proctor Dump (miles)	Estimated Population
On a Source	0
> 0.00 to 0.25	28
> 0.25 to 0.50	107
> 0.50 to 1.00	495
> 1.00 to 2.00	1,730
> 2.00 to 3.00	1,827
> 3.00 to 4.00	4,129
TOTAL	8,316

[23]

There are no State-listed or Federally-listed endangered or threatened species known to live on the property. There are no Federal-candidate species located within 4-radial miles of the property. Three State-endangered/threatened species occupy habitats located within 4-radial miles of Proctor Dump [34]. Table 10 summarizes the sensitive environments located within 4-radial miles of Proctor Dump.

Table 10

Sensitive Environments Located Within 4-Radial Miles of Proctor Dump

Radial Distance from Proctor Dump (miles)	Sensitive Environment/Species Status
> 0.00 to 0.25	Clean Water Act
	23 acres wetlands
> 0.25 to 0.50	48 acres wetlands
> 0.50 to 1.00	43 acres wetlands
> 1.00 to 2.00	260 acres wetlands
> 2.00 to 3.00	One State-endangered species habitat
	482 acres wetlands
> 3.00 to 4.00	Two State-threatened species habitats
	955 acres wetlands

[29-34; 37]

On 13 May 1997, START personnel conducted an on-site reconnaissance at Proctor Dump. Periodic ambient air monitoring using a PID was conducted during the on-site reconnaissance. No readings above background were observed [3, p. 3]. No laboratory qualitative air samples are known to have been collected the Proctor Dump property. Based on the available data, no release of hazardous substances to the ambient air from on-site sources is known or suspected to have occurred and no impacts to nearby residential populations or sensitive environments are known or suspected.

SUMMARY

Proctor Dump (the dump) is a former municipal dump located on John Deere Road in the Town of Pittsford, Rutland County, Vermont at 43° 40' 5.0" N and 73° 01' 26.6" W. The dump is located on two lots identified on Pittsford Tax Assessor's Map No. 11. The northern portion of the dump is located on the southern portion of Lot No. VT3-96, owned by Mr. William Taranovich Sr. Until 30 May 1997, the southern portion of the dump was designated as the northern portion of Lot No. VT3-98 (then owned by Omya, Inc.). On 30 May 1997, Omya, Inc. deeded the Proctor Dump portion of Lot No. VT3-98 to the Town of Proctor. To date, the Pittsford Tax Assessor's office has not assigned a new lot number to the Proctor Dump portion of Lot No. VT3-98.

The Proctor Dump accepted municipal solid waste from Proctor from approximately the 1930s to 1981. Pittsford also disposed of municipal solid waste in the dump from approximately 1965 to 1971. Prior to the 1970s, the municipal solid waste was burned in a burning dump on the property. In 1967, this original burning dump area was closed and capped with silty sands. This lobe is approximately 67,000 square feet (ft²). In 1967, Proctor established a second lobe of the dump, downslope of the first lobe, and began operating under the guidance of the Vermont Agency of Natural Resources (VT ANR), which included carrying out proper compaction and capping. The second lobe is approximately 148,000 ft². The Preliminary Assessment (PA) conducted by VT ANR in 1987 indicated that the Proctor Dump was operated until 1981. However, during the on-site reconnaissance, Roy F. Weston, Inc. (WESTON®) Superfund Technical Assessment Response Team (START) personnel were informed that the dump accepted municipal solid waste until 1984. Town officials reported to START personnel that both lobes of the dump were covered with clean fill material. Currently, the second lobe area of the closed dump is operated as a transfer station and stump and brush burning area by Proctor for its residents.

The Proctor Dump is mapped within the aquifer protection area (APA) for the Proctor Water Department public groundwater supply well. Due to the location of the APA, and complaints regarding municipal solid waste floating in the adjacent wetland, the Proctor Dump was not given state approval to operate as a dump. The PA documented that from 1969 until its alleged closure in 1981, the dump operated under an Assurance of Discontinuance from VT ANR. No further information was available regarding the Assurance of Discontinuance.

Municipal solid waste is the only type of waste documented to be disposed of at the Proctor Dump. There is no record of hazardous waste disposed of on the property; however, the PA reports that disposal of metal shavings and solvent-containing debris may have occurred in the 1940s. On 26 June 1997, START personnel attempted to collect source samples from Lobe Nos. 1 and 2 of the dump, but were not able to extend beyond the layer of fill. To date, no known soil or source samples have been collected from the Proctor Dump property.

On 26 June 1997, START personnel collected six sediment samples (SD-01 through SD-06) from the unnamed stream and unnamed stream wetlands located along the western, southern, and eastern borders of Proctor Dump. The samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides/polychlorinated biphenyls (PCBs), metals, and cyanide through the Environmental Protection Agency (EPA) Contract Laboratory

Program (CLP). The following sample results, quantified with a "J", are considered approximate because of limitations identified during CLP data validation. In addition, organic sample results reported at concentrations below quantitation limits and confirmed by mass spectrometry are also qualified by a "J" and considered approximate.

START sediment sample SD-01 contained four VOCs at concentrations ranging from 19 parts per billion (ppb) to 68 ppb. Five SVOCs were detected in SD-01 at concentrations ranging from 160 J ppb to 1,500 ppb. Five metals were detected in SD-01 at concentrations ranging from 0.35 parts per million (ppm) to 13,500 ppm. SD-02 contained 13 SVOCs at concentrations ranging from 570 J ppb to 13,000 ppb. The pesticides endosulfan II and 4,4'-DDT were detected in SD-02 at concentrations of 6.0 J ppb and 8.6 J ppb, respectively. Barium, lead, and sodium were detected in SD-02 at concentrations of 49.5 ppm, 22.9 ppm, and 105 J ppb, respectively. Methylene chloride was detected in SD-03 at 48 J ppb. Fourteen SVOCs were detected in SD-03 (collected as a duplicate of SD-02) at concentrations ranging from 260 J ppb to 11,000 ppb. Endosulfan II and 4,4'-DDT were detected in SD-03 at 5.0 J ppb and 8.1 J ppb, respectively. Barium, lead, and sodium were detected in SD-03 at concentrations of 55.3 ppm, 25.1 ppm, and 117 J ppm, respectively. SD-04 contained beryllium (0.07 J ppm) and sodium (95.2 J ppm). Since the characteristics of the waste disposed of in Proctor Dump are unknown, and no other sources have been identified directly upstream of the Proctor Dump, based on sample locations it is likely that the VOCs, SVOCs, pesticides, and metals that have been detected in the unnamed stream sediments are attributable to Proctor Dump.

There are two part-time, and no full-time employees on the Proctor Dump property. The nearest residence is located approximately 110 feet (ft) north of the property. The population located within 4-radial miles from Proctor Dump is 8,316. There are no known day-care facilities located within 200 ft of an area of observed contamination on Proctor Dump. Approximately 1,811 acres of wetlands are located within 4-radial miles of Proctor Dump. The nearest wetland is located adjacent to the southeastern, southern, and southwestern toes of Proctor Dump.

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